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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

DAO, MINH D

ART UNIT PAPER NUMBER

2682

DATE MAILED: 05/10/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/085,480

Applicant(s)

SABONGI ET AL.

Examiner

MINH D DAO

Art Unit

2682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02/12/2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 1, are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamai (US Patent 5,710,979) in view of Casper (US Patent 5,541,589).

Regarding claim 1, Tamai teaches a method of identifying nonfunctional two-way (Col. 4, lines 66-67; Col. 5, lines 1-2) radios from among a known group of two-way radios expected to be operating within a region (See Figs 1 and 2; in this case, the region as claimed read on the communication network in reference Tamai), the method

comprising: for each of the two-way radios expected to be operating within the region, establishing a corresponding window of time (Col. 4, lines 56-67; in this case, the window of time as claimed read on the response interval of reference Tamai); for each of the established windows of time, awaiting a transmission from the corresponding radio (Col. 4, lines 56-67); if, for a particular radio, no transmission is detected within its corresponding window of time, recording the absence of the transmission (Col. 5, lines 15-26; Col. 6, lines 52-58; item M; Col. 4, lines 51-54). However, Tamai fails to teach that if for a particular radio, the number of times absence of transmission has been recorded exceeds a threshold, identifying the particular radio as nonfunctional. Casper, in an analogous art, teaches that for a particular radio, if the number of times absence of transmission has been recorded exceeds a threshold, identifying the particular radio as nonfunctional (col. 9, lines 54-62). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide the teaching of Casper to Tamai in order to prevent the situation that the particular radio is mistakenly identified as nonfunctional.

Regarding claim 2, the combination of the teachings of Tamai and Casper teaches The method of claim 1, wherein the step of establishing a time window corresponding to each radio comprises: for each of the two-way radios expected to be operating in the region, assigning a corresponding unique delay period (Reference Tamai, Col. 4, lines 66-67; Col. 5, lines 1-2; Col. 12, lines 61-67; Col. 13, lines 1-5; in this case the unique delay period as claimed read on the "cycle" of reference Tamai); broadcasting a query

signal (Reference Tamai ,Col. 4, lines 57-67); following the broadcast of the query signal, for each of the two-way radios, commencing the window of time corresponding to a particular radio (Reference Tamai, Col. 5, lines 14-21), after waiting for the unique delay period assigned to the particular radio to elapse; and for each of the two-way radios, closing, its corresponding window of time, after waiting for a pre-defined period to elapse (Reference Tamai, col. 5, lines 22-25).

Regarding claim 3, the combination of the teachings of Tamai and Casper teaches the method of claim 1 wherein the step of establishing a time window corresponding to each radio comprises: transmitting a query signal containing a code identifying a particular radio (Reference Tamai, Col. 12, lines 61-67); commencing the window of time corresponding to the particular radio, upon transmission of the query signal; and closing the window of time corresponding to the particular radio (Reference Tamai, Col. 5, lines 14-21), after waiting for a pre-defined period of time to elapse (Reference Tamai, Col. 5, lines 22-25).

Regarding claim 4, the combination of the teachings of Tamai and Casper teaches the method of claim 1 wherein the step of establishing a time window corresponding to each radio comprises: opening a window of time corresponding to all of the radios (Reference Tamai, Col. 5, lines 14-21); waiting for a predefined period to elapse; and closing the window of time (Reference Tamai, Col. 5, lines 22-25).

Regarding claim 5, the combination of the teachings of Tamai and Casper teaches the method of claim 1 wherein the step of awaiting a transmission from a radio corresponding, to a window of time comprises: receiving transmissions on a carrier frequency assigned to the radio corresponding to the window of time (Reference Tamai, Col. 4, lines 56-67, Col. 5, lines 1-2); and inspecting the received transmissions for presence of an identification code (Reference Tamai, Col. 4, lines 57-66) corresponding to the radio corresponding to the window of time.

Regarding claim 9, the combination of the teachings of Tamai and Casper teaches that the method of claim 1 further comprising: upon identifying a particular radio as nonfunctional, issuing an alert (Reference Tamai, Col. 5, lines 22-25).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under

37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 10,11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamai (US Patent 5,710,979) in view of Casper (US Patent 5,541,589) and further in view of Gabrielle (US Patent 5,673,036).

Regarding claim 10, the combination of the teachings of Tamai and Casper teaches limitations of claim 9 above but fails to teach issuing an alert comprises presenting a message on a display screen. Gabrielle teaches that issuing an alert comprises presenting a message on a display screen (see Fig. 1, item 108; Col. 2, lines 60-64). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide the teaching Gabrielle to the teachings of Tamai and Casper for the benefit of experiencing the convenience of having the message displayed on the screen.

Regarding claim 11, the combination of the teachings of Tamai and Casper teaches limitations of claim 1 above but fails to teach that upon identifying a particular radio as nonfunctional, contacting a repair service; and identifying the nonfunctional radio to the repair service. Gabrielle teaches that upon identifying a particular radio as

nonfunctional, contacting a repair service; and identifying the nonfunctional radio to the repair service (Col. 5, lines 1-15). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide the teaching Gabrielle to the teachings of Tamai and Casper in order to be able to notify a device service provider to request for service.

3. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tamai (US Patent 5,710,979) in view of Casper (US Patent 5,541,589) and further in view of Braun et al. (US Patent 6,512,832).

Regarding claim 6, the combination of the teachings of Tamai and Casper teaches limitations as claimed in claim 5 but fails to teach that the identification code is a sinusoid of a pre-defined frequency. Braun discloses a sinusoidal identification code of a pre-defined frequency (Col. 6, lines 44-48). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide the teaching of Braun to the teachings of Tamai and Casper in order to have a simple and low cost way of identifying a transmitted signal.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tamai (US Patent 5,710,979) in view of Casper (US Patent 5,541,589) and further in view of Gurney et al. (US 2003/0072358 A1).

Regarding claim 7, the combination of the teachings of Tamai and Casper teaches limitations as claimed in claim 5 but fails to teach that the identification code is a pre-defined binary signal. Gurney discloses a binary identification code of a pre-defined frequency (See section [0038]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to provide the teaching of Braun to the teachings of Tamai and Casper in order to have a simple and low cost way of identifying a transmitted signal.

Allowable Subject Matter

5. Claims 8, 12 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 8, the combination of the teachings of Tamai and Casper teaches the limitations set forth in claim 1. However, the combination fails to teach that the method of claim 1 further comprising: assigning a first frequency upon which all of the two-way radios are to receive transmissions; assigning a second frequency upon which all of the two-way radios are to broadcast transmissions; and assigning a unique identification code to each of the two-way radios.

Regarding claim 12, the combination of the teachings of Tamai and Casper teaches the limitations set forth in claim 1. However, the combination fails to teach that the method of claim 1 further comprising: during an initialization sequence for a particular radio, receiving from the particular radio, a unique identification code to be embedded in the radio's awaited transmission during its corresponding window of time; receiving a serial number identifying the particular radio; and adding the particular radio's unique identification code and serial number to a list of two-way radios expected to be operating in the region.

6. Claims 19-34 are allowed.

7. The following is an examiner's statement of reasons for allowance:

Regarding claim 19, cited references Tamai (US Patent 5,710,979), Casper (US Patent 5,541,589) and Bamburak (US 2003/0137466 A1) fail to teach a wireless intercom system comprising: a first two-way radio fashioned as a headset; a second two-way radio fashioned as a headset; and a repeater unit; wherein transmissions from the first and second two-way radio occur upon a first carrier frequency; wherein the first and second two-way radios receive transmissions carried upon a second carrier frequency; wherein the repeater unit receives transmission carried upon the first carrier frequency, and broadcasts transmissions upon the second carrier frequency, thereby enabling the first and second two-way radios to communicate; wherein the repeater unit establishes

a first window of time corresponding to the first radio and a second window of time corresponding to the second radio; wherein, the repeater unit awaits a transmission from the first radio during the first window of time, and awaits a transmission from the second radio during the second window of time; Wherein, the repeater unit records absence of transmission from the first radio, if no transmission is received from the first radio during the first window of time; wherein, the repeater unit records absence of transmission from the second radio, if no transmission is received from the second radio during the second window of time; wherein, the repeater unit identifies the first radio as nonfunctional if the number of times absence of transmission by the first radio has been recorded exceeds a threshold; and wherein, the repeater unit identifies the second radio as nonfunctional if the number of times absence of transmission by the second radio has been recorded exceeds a threshold.

Response to Arguments

8. Applicant's arguments with respect to claims 1-7, 9-11 have been considered but are moot in view of the new ground(s) of rejection.

9. Applicant's arguments filed 02/12/2004 have been fully considered but they are not persuasive.

Regarding claim 14, Applicant argues that Bumburack does not teach knowing of the protocol governing subsequent transmissions at the time the transmission is made. However, the Examiner disagrees. It is well known in the art that the call set up overhead information of any wireless system would contain the protocol type of the system in order to technically register with a service provider system. Therefore, reference Bumburack (section [0006]) reads on this limitation.

Claims 15-18 are dependent of claim 14, and therefore still remain rejected for the same reason set forth in the previous office action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MINH D DAO whose telephone number is 703-305-5589. The examiner can normally be reached on 8:30 AM - 5:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, VIVIAN C CHIN can be reached on 703-308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Minh Dao
Examiner
Art Unit 2682
April 25, 2004 *mon*


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513104